WHAT IS CLAIMED IS:

1. A display apparatus for irradiating with light generated by a light source a light modulating element and forming a display image plane from the light which is transmitted through or reflected by the light modulating element, comprising:

input image calculating means for performing predetermined calculation according to an input display signal;

light quantity controlling means for controlling light quantity irradiated onto said light modulating element according to a result of said calculation; and

a memory for storing the display signal subjected to the calculation by said input image calculating means, and thereafter for outputting the display signal to said light modulating element.

2. A display apparatus for irradiating light generated by a light source onto a light modulating element inputting modulated signal formulated by converting a display signal inputted in an analog state into digital display signals and thereafter subjecting the digital display signal to a predetermined processing, and for forming a display image plane from the light transmitted through or reflected by the light modulating element, comprising:

input image calculating means for performing

predetermined calculation according to the display signal;

light quantity controlling means for controlling light quantity irradiated onto said light modulating element according to a result of said calculation; and

an adjusting circuit for adjusting the display signal according to a result of the calculation,

wherein said adjusting circuit adjusts the display signal before the display signal in said analog state are converted into digital display signal.

3. A display apparatus for irradiating light generated by a light source onto a light modulating element, and for forming a display image plane with the light transmitted through or reflected by the light modulating element, comprising:

input image calculating means for performing a predetermined calculation according to an input display signal; and

light quantity controlling means for controlling light quantity irradiated onto said light modulating element according to a result of the calculation,

wherein said light quantity controlling means sets a change rate of light quantity, such that the change rate at decreasing the light quantity is smaller than a change rate at increasing the light quantity.

4. A display apparatus for irradiating light generated by a light source onto a light modulating element, and for forming a display image plane from the light transmitted though or reflected by said light modulating element, comprising:

input image calculating means for performing a predetermined calculation according to an input display signals; and

light quantity controlling means for increasing or decreasing a light quantity irradiated onto said light modulating element step by step according to a value determined by result of said calculation,

wherein a threshold value at which said light quantity controlling means increases the light quantity from a first stage being a predetermined stage into a second stage increased therefrom by one step according to the calculation is different from a threshold value at which said light quantity controlling means decreases the light quantity from the second stage into a stage of smaller light quantity.

5. The display apparatus according to claim 4, wherein said light quantity controlling means set so as to increase said light quantity from said first stage to said second stage when the value determined by said calculation changes in the first direction to exceed the first threshold value, and so as to decrease said

light quantity from said second stage to a stage of a low light quantity when the value determined by said calculation changes in the second direction being opposite against said first direction to exceed the second threshold value set in the side of said second direction than said first threshold value.

6. The display apparatus according to claim 5, wherein the stage of the low light quantity is said first stage.

7. The display apparatus according to claim 1, further comprising an adjusting circuit for adjusting display signal according to a result of the calculation.

8. The display apparatus according to claim 3, further comprising an adjusting circuit for adjusting display signal according to a result of the calculation.

9. The display apparatus according to claim 4, further comprising an adjusting circuit for adjusting display signal according to a result of the calculation.

10. The display apparatus according to claim 1,

wherein said calculation is calculation to give maximum luminance in said display signals inputted within a predetermined period.

11. The display apparatus according to claim 2, wherein said calculation is calculation to give maximum luminance in said display signals inputted within a predetermined period.

12. The display apparatus according to claim 3, wherein said calculation is calculation to give maximum luminance in said display signals inputted within a predetermined period.

13. The display apparatus according to claim 4, wherein said calculation is calculation to give maximum luminance in said display signals inputted within a predetermined period.

14. The display apparatus according to claim 1, wherein said calculation is calculation to give a number of data exceeding a predetermined luminance among luminance data included in said display signals inputted within a predetermined period include.

15. The display apparatus according to claim 2, wherein said calculation is calculation to give a

number of data exceeding a predetermined luminance among luminance data included in said display signals inputted within a predetermined period include.

16. The display apparatus according to claim 3, wherein said calculation is calculation to give a number of data exceeding a predetermined luminance among luminance data included in said display signals inputted within a predetermined period include.

17. The display apparatus according to claim 4, wherein said calculation is calculation to give a number of data exceeding a predetermined luminance among luminance data included in said display signals inputted within a predetermined period include.

18. The display apparatus according to claim 1, further comprising sensors for detecting light quantity irradiated onto said light modulating element, wherein said light quantity controlling means controls the light quantity based on the calculation results and a detection results by said sensors.

19. The display apparatus according to claim 2, further comprising sensors for detecting light quantity irradiated onto said light modulating element, wherein said light quantity controlling means controls the

light quantity based on the calculation results and a detection results by said sensors.

20. The display apparatus according to claim 3, further comprising sensors for detecting light quantity irradiated onto said light modulating element, wherein said light quantity controlling means controls the light quantity based on the calculation results and a detection results by said sensors.

21. The display apparatus according to claim 4, further comprising sensors for detecting light quantity irradiated onto said light modulating element, wherein said light quantity controlling means controls the light quantity based on the calculation results and a detection results by said sensors.

22. The display apparatus according to claim 1, comprising an adjusting circuit for adjusting display signal according to said calculation result, and a sensor for detecting light quantity irradiated onto said light modulating element, wherein said adjusting circuit performing the adjustment according to the calculation result and the detection result by said sensor.

23. The display apparatus according to claim 3,

comprising an adjusting circuit for adjusting display signal according to said calculation result, and a sensor for detecting light quantity irradiated onto said light modulating element, wherein said adjusting circuit performing the adjustment according to the calculation result and the detection result by said sensor.

24. The display apparatus according to claim 4, comprising an adjusting circuit for adjusting display signal according to said calculation result, and a sensor for detecting light quantity irradiated onto said light modulating element, wherein said adjusting circuit performing the adjustment according to the calculation result and the detection result by said sensor.

25. The display apparatus according to claim 1, comprising means for setting quantity of changing irradiation light quantity, so as to set changing quantity or change rate of said irradiating light quantity.

26. The display apparatus according to claim 2, comprising means for setting quantity of changing irradiation light quantity, so as to set changing quantity or change rate of said irradiating light

quantity.

27. The display apparatus according to claim 3, comprising means for setting quantity of changing irradiation light quantity, so as to set changing quantity or change rate of said irradiating light quantity.

28. The display apparatus according to claim 4, comprising means for setting quantity of changing irradiation light quantity, so as to set changing quantity or change rate of said irradiating light quantity.

29. The display apparatus according to claim 26, wherein said change rate is greater in a trend to increase irradiation light quantity than in a trend to decrease irradiation light quantity.

30. The display apparatus according to claim 28, wherein said change rate is greater in a trend to increase irradiation light quantity than in a trend to decrease irradiation light quantity.

31. The display apparatus according to claim 1, wherein said light quantity controlling means are means to be disposed between said light source and said light

modulating element to control light quantity to be irradiated onto said light modulating element from said light source.

32. The display apparatus according to claim 2, wherein said light quantity controlling means are means to be disposed between said light source and said light modulating element to control light quantity to be irradiated onto said light modulating element from said light source.

33. The display apparatus according to claim 3, wherein said light quantity controlling means are means to be disposed between said light source and said light modulating element to control light quantity to be irradiated onto said light modulating element from said light source.

34. The display apparatus according to claim 4, wherein said light quantity controlling means are means to be disposed between said light source and said light modulating element to control light quantity to be irradiated onto said light modulating element from said light source.

35. The display apparatus according to claim 1, wherein said light quantity controlling means is means

to control voltage or current to be supplied to said light source.

36. The display apparatus according to claim 2, wherein said light quantity controlling means is means to control voltage or current to be supplied to said light source.

37. The display apparatus according to claim 3, wherein said light quantity controlling means is means to control voltage or current to be supplied to said light source.

38. The display apparatus according to claim 4, wherein said light quantity controlling means is means to control voltage or current to be supplied to said light source.

39. An image signal processing apparatus used in a display apparatus for irradiating light generated by a light source onto a light modulating element, and for forming a display image plane from the light transmitted through or reflected by said light modulating element, comprising:

input image calculating means to performing predetermined calculation according to an input display signal;

means for outputting a control value for controlling light quantity irradiated onto said light modulating element according to a result of the calculation; and

a memory for storing display signal subjected to the calculation by said input image calculating means, and thereafter outputting the display signal to said light modulating element.

40. An image signal processing apparatus used in a display apparatus for irradiating light generated by a light source onto a light modulating element inputting modulated signal formed by converting a display signals inputted in an analog state into digital display signals and thereafter subjecting the converted digital signal to a predetermined processing, and for forming a display image plane from the light transmitted through or reflected by said light modulating element, comprising:

input image calculating means for performing predetermined calculation according to a display signal;

means for outputting a control value for controlling light quantity irradiated onto said light modulating element according to a result of the calculation; and

an adjusting circuit for adjusting display signal

according to a result of the calculation,

wherein said adjusting circuit adjusts display signal before the conversion of the display signals in said analog state into digital display signals.

41. An image signal processing apparatus used in a display apparatus for irradiating light generated by a light source onto a light modulating element, and for forming a display image plane from the light transmitted through or reflected by said light modulating element, comprising:

input image calculating means for performing predetermined calculation according to an input display signal; and

means for outputting a control value to control light quantity irradiated onto said light modulating element according to a result of the calculation; and

wherein said control value is set such that a change rate at decreasing the light quantity is smaller than a change rate at increasing the light quantity.

42. An image signal processing apparatus used in a display apparatus for irradiating light generated by a light source onto a light modulating element, and for forming a display image plane from the light transmitted through or reflected by said light modulating element, comprising:

input image calculating means for performing predetermined calculation according to an input display signal; and

means for outputting a control value to increase or decrease a light quantity irradiated onto said light modulating element step by step according to a value determined by result of the calculation,

wherein a threshold value at which said means for outputting a control value outputs a control value to increase a first stage being a predetermined stage into a second stage by increasing said light quantity by one step corresponding to a value determined by said calculation is different from a threshold value at which said means output a control value decreased from the second stage into a stage with less light quantity.